

## ABSTRACT OF THE DISCLOSURE

A medical testing system includes telemetry features whereby physiological data collected by a collection device at a medical facility is transmitted to a remote processing center for analysis by a trained analyst to provide a test result. In one embodiment, the collection device is a heart rate monitor capable of collecting data with which heart rate variability can be assessed. The heart rate monitor includes a display on which is displayed a waveform showing the breathing performance of the patient during data collection along with standards against which to compare the waveform in order to determine the extent to which the patient followed a predetermined breathing regimen during data collection. The operator of the monitor can use the performance waveform to assess how well the test was taken (i.e., how well the patient complied with the prescribed breathing regimen) and can accept or reject the physiological data accordingly. Also described is a medical testing telemetry system including two processing centers, with each collection device being capable of communicating with both processing centers. Each collection device randomly chooses one of the processing centers for analysis of the collected physiological data. The two processing centers are interconnected in order to permit physiological data and test results to be replicated and stored at both sites.